

## BOOK REVIEWS

COLEOPTERA OR BEETLES EAST OF THE GREAT PLAINS, by J. Gordon Edwards, lithoprinted by Edwards Brothers, Ann Arbor, Michigan, 1949. \$3.50.

This is one of the most interesting books that has come to my attention for some time. It embodies many new ideas in style and preparation and is worth careful study in this regard. The method of illustration, the "reversible" key, and the attempt at simplification of language are all to be praised, as is the general layout of the book and the indexing of it.

Unfortunately, it appears that Mr. Edwards' fresh approach to the classification of beetles has not been combined with a depth of understanding sufficient to avoid several serious and basic faults. Many of the general remarks on classification and all of those on nomenclature show a lack of experience in both taxonomy and the expression of ideas such as to detract seriously from the accuracy and usability of the book. It might be that these faults could be overlooked in the first edition of the book, but they are combined with a new and unbalanced treatment of families which is sure to be confusing to all users.

It is difficult to single out specific things to justify this appraisal. One paragraph in the introduction is headed "Changing Beetle Relationships." Surely there has never been any actual change in beetle relationships, but only changes in our understanding or beliefs about them. A transfer of a species to another family is referred to as a "phylogenetic change." It is nothing more than one man's opinion that his predecessor was wrong.

It is stated that the changing of scientific names of species "is a necessity occasioned by the International Laws of Nomenclature." It is true that a few changes of names are required because some writers have not kept their work in conformity with the International *Rules*, but these changes are usually caused not by the Rules but by the writers that neglect or have neglected them. Most changes of names are caused by changes in our knowledge of the insects, and cannot be prevented by rules or any other means.

Family names are said to have been changed because of priority; others to have been "officially accepted." Such statements are, of course, pure misconception or misuse of words, since priority has not been generally recognized as a criterion in family names, and none of these names have any "official" status whatever.

The explanation line under many family headings is a useful feature. It gives a clue to a previous status of the name. In certain cases, however, the wording is misleading. For example, under Alleculidae, "(A new name for old family Cistelidae)." It is not new here and was not originally proposed as a replacement for Cistelidae.

Again, under Passalidae, "(Formerly genus *Passalus* of family Lucanidae)." This is very startling but is probably true. Still it seems worse than useless in an elementary manual to dig up a century-old fact that can be of no use to any one and is definitely misleading.

On page 162 is given a "Phylogenetic List of Families . . ." that "indicates a progressive complexity of structure believed to represent their degrees of evolutionary development." It is difficult to see what is meant here, for it is obvious that no linear arrangement of families can show either phylogeny or the degree of evolutionary development. It can scarcely be maintained that the list shows relative complexity either of families or individuals. Some of the families listed show nearly as great range in specialization within themselves as the whole order shows.

We might use pages on such minor points as a 169 volume Junk Catalogue (actually 31 volumes), a *Genera Insectorum* which "covers the genera of beetles of the world" (actually only 65 parts are on beetles—only 27 families), words like foetogenesis omitted from the glossary, the family Staphylinidae said to be characterized by a habit which is actually exhibited only by part of one tribe, and inadequate definitions of many terms, such as caudad, oblique, prosternum, sternite, and ventro-cephalic.

The most important departure from previous books is in the classification, where an entirely new breakdown of families is employed without direct justification. The families Scarabaeidae, Chrysomelidae, and Curculionidae (especially) are broken up into several families which have usually been treated as subfamilies. Nearly all of these families have been previously used in this manner, but by authors who also used many others. For example, in the Scarabaeidae Edwards withdraws three groups leaving several equally distinct subfamilies untouched. In the Curculionidae, after the removal of twelve groups, the family is still said to be heterogeneous. And nothing whatever has been gained by the withdrawals, except to complicate the family listings. Similar elevations of subfamilies to family rank have been proposed by other workers in other groups, as in the Carabidae, but in this book they are not mentioned.

In short the classification is unbalanced, is not accompanied by justifications or reasons, and serves only to complicate. It does not make it easier to key out the families, since 291 couplets were required to key out 139 families. It does not help to show relationships but rather differences, except that the differences shown are not always the most important ones.

In addition to all this, the chief claim of the book, that the key will enable one to make positive identification, is not borne out by trials with several common beetles. This key differs in no fundamental way from other keys to Coleoptera, is no less scientific, is not simpler, and is equally dependent upon the judgment of the user. This does not

mean that the key may not be an improvement over others. Its faults are caused by the same factors, the complexity of the order Coleoptera and the limitations of the author and his knowledge of the beetles.

It appears that these faults might be eliminated in a future edition by consultation with persons of wider experience. Until this is done there is too much chance that the shortcomings of the book will outweigh its advantages in their effect on the non-professional user.

R. E. B.

KAFER UND PILZE, by Otto Scheerpeltz and Karl Hôfler. 351 pages, 19 text figures, 9 plates (8 colored). Verlag für Jugend und Volk, Wien. Price, \$5.40.

The fungus-inhabiting beetles in word and picture; the results of 35 collecting expeditions in one season in the vicinity of Vienna; and the fungi as a dwelling-place for beetles; these are the major topics of this unusual book.

The collections of beetles and fungus are carefully identified, with list of the species found on each excursion and lists of the beetles found in each species of fungus. The beetles are studied systematically, with descriptions and keys, the host fungi, distribution, and ecology.

Ecological analyses include discussion of biotopes, of the pH, smell, and taste of the fungi (chemically), of the sociology of the inhabitants, and of the succession of visitors to each species of fungus.

A bibliography of nearly 150 titles provides a major course of information on the entire subject of insect inhabitants of fungi, including systematic, geographic, ecologic, morphologic, and physiologic papers.

In addition the book is illustrated with two maps, one graph, 19 text figures containing 55 drawings, one plate of 10 figures showing beetle form as well as distinguishing characters, and 8 colored plates. The latter show 43 species of beetles and 24 species of fungus.

The systematic section reflects the lifelong interest of Dr. Scheerpeltz in staphylinid beetles. Keys for determination of the Central European species of six genera are given. In addition 8 new species and one new subgenus are described (7 species in *Atheta*, one in *Oxy-poda*; the subgenus *Lepthartbrophaena* in *Gyrophaena*).

It is seldom that we have the pleasure of reviewing such a satisfactory book in a specialized subject. This one combines two widely separated fields, is the result of new and extensive researches, and is produced under high standards of publication. It seems like a miracle for such a book to be published in Austria in these difficult times.

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